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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,151

09/21/2006

Masaki Yanagioka

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EXAMINER

USELDING, JOHN E

ART UNIT

PAPER NUMBER

1763

NOTIFICATION DATE

DELIVERY MODE

06/23/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/599,151	Applicant(s) YANAGIOKA, MASAKI	
	Examiner JOHN USELDING	Art Unit 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/10/2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102/103

Claims 1-7 and 10-11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sakakibara (6,197,870).

Regarding claims 1-3: Sakakibara teach a rubber composition for tire tread (column 1, lines 7-12) comprising 20-150 parts by weight of carbon black per 100 parts of a rubber component (claim 6). All the examples of Sakakibara are within the claimed range (Tables 4 and 5). The Applicant also claims the process by which the carbon black is made. This is a product by process limitation. Process limitations in product claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "In re Thorpe , 227 USPQ 964, 966 (Fed. Cir. 1985). Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prima facie* case can be rebutted by evidence showing that the

prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. See also *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). The examiner notes that Sakakibara teach that their process of producing carbon black using a production furnace having a combustion zone, reaction zone, and reaction stop zone coaxially connected together wherein the carbon black is made using a combustion reaction and includes a step of quenching the reaction (column 6, line 38 to column 7, line 18). Sakakibara teach examples where the TINT and the CTAB are within the claimed ranges (Table 8, Examples 4-7). Applicant claims that the hydrogen desorption ratio is greater than $0.260 - 6.25 \times 10^{-4} \times \text{CATB}$. Sakakibara does not specifically teach this property for their carbon black. This is not a test that is normally used in the art to test the properties of carbon black. The Office takes the position that Examples 4-7 would inherently meet this limitation. All four (DBP, compressed DBP, CTAB, and TINT) of the physical property tests taught by Sakakibara meet the applicant's limitations. The applicant alleges that when the hydrogen desorption ratio does not meet this limitation that the wear resistance of the tire tread lowers and the heat build up becomes undesirable high (paragraph 0023). Sakakibara are also concerned with wear resistance (abrasion resistance) and heat build up (represented by $\tan \delta$) of tire tread (column 10, lines 7-25). The values given in Table 5 show that the carbon black of Sakakibara provides both a low heat buildup and good wear resistance. If applicant's allegations are correct, hydrogen desorption ratios of Examples 4-7 must meet applicant's limitations otherwise the heat buildup and wear

resistance values would have been bad. The examiner also notes that the applicant has not provided sufficient evidence to prove their assertion. There are no examples where all the other factors stay the same and only the hydrogen desorption ratio changes from meeting this limitation to not meeting this limitation. The applicant has failed to show that the hydrogen desorption ratio of the carbon black affects the physical structure of the rubber composition. Sakakibara does not teach a toluene tinting permeability value. The Office takes the position that Examples 4-7 would inherently meet this limitation. All four (DBP, compressed DBP, CTAB, and TINT) of the physical property tests taught by Sakakibara meet the applicant's limitations. Alternatively, the claimed properties would be obvious.

Regarding claims 4 and 5: Sakakibara teaches examples where the DBP, 24M4DBP, and CTAB values are within the claimed ranges (Examples 4-7).

Regarding claim 6: Sakakibara teach examples where the tinting strength $>0.363 \times \text{CTAB} + 71.792$ (Table 1, Examples 4 and 5).

Regarding claim 7: Sakakibara teaches examples where the tinting strength $<0.363 \times \text{CTAB} + 71.792$ and $\text{TINT} > 50$ (Table 1, Examples 6 and 7).

Regarding claim 10: Sakakibara teaches examples 4-7, which inherently meet the claimed monochlorobenzene extraction limitation. The applicant alleges that when the extraction amount with monochlorobenzene exceeds 0.15% the wear resistance is undesirably deteriorated (paragraph 0024). Sakakibara is also concerned with wear resistance (abrasion resistance) of tire tread (column 10, lines 21-25). The values given

in Table 5 shows that examples 4-7 have superior wear resistance. If applicant's allegations are correct the extraction amount with monochlorobenzene of examples 4-7 must not be more than 0.15% otherwise the wear resistance values would have been bad. The examiner also notes that the applicant has not provided sufficient evidence to prove their assertion. There are no examples where all the other factors stay the same and only the extraction amount with monochlorobenzene changes from at or below 0.15% to above 0.15%. The applicant has failed to show that the extraction amount with monochlorobenzene of the carbon black affects the physical structure of the rubber composition.

Regarding claim 11: Sakakibara teaches that their composition is used in tire treads of various automobiles (column 1, lines 7-12) and that the tires are made for low fuel consumption (column 1, lines 21-31). Given the description of Sakakibara the skilled artisan would immediately envisage pneumatic tires.

Response to Arguments

Applicant's arguments filed 5/10/2011 have been fully considered but they are not persuasive.

The declaration under 37 CFR 1.132 filed 3/30/2010 is insufficient to prove that the examples of Sakakibara do not possess the claimed properties: Applicant has used a different reactor for making the carbon black than was used in Sakakibara. Sakakibara consider their reactor to be critical in producing their carbon black. In their comparative

examples the reactor was altered to show the beneficial results provided using their reactor (see figures 3 and 4).

The Applicant has stated that Sakakibara does not disclose or suggest the effects of hydrogen desorption ratio and the toluene tinting permeability of carbon black on the wear resistance and low heat buildup. These tests are used to determine the physical properties of the carbon black. Sakakibara teaches several types of tests that are used to determine the physical properties of the carbon black (column 3, line 49 to column 5, lines 32). Sakakibara teaches optimizing the properties that underlie the tests, which is the size, shape, and surface properties of the carbon black (column 3, line 50 to column 4, line 62) to obtain good wear resistance (abrasion resistance) and heat build up (represented by $\tan \delta$) of tire tread (column 10, lines 7-25). Since Sakakibara provides teaching and motivation that the physical properties of the carbon black have an effect on good wear resistance and heat build up. They would be motivated to optimize the properties for good wear resistance and heat build up. Just because Sakakibara did not perform the same test on their carbon black does not mean they did not recognize that that particular physical property that the test measures is important for obtaining good wear resistance and heat build up.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN USELDING whose telephone number is (571)270-5463. The examiner can normally be reached on Monday-Thursday 6:00am-4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MILTON I CANO/
Supervisory Patent Examiner, Art Unit 1763

/JU/
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